

IN THE CLAIMS

Please amend the claims as follows wherein added text is indicated with underlining and deleted text is indicated with ~~strikethrough~~ or [[double brackets]]:

Please amend the claims as follows.

1. (Currently Amended) A method of increasing a quantity of differentiable programming content available in a digital programming transmission stream, said method comprising:

creating a plurality of digital programming components, more than one of the plurality of digital programming components capable of being presented to a user concurrently, the plurality of digital programming components utilizing a bandwidth of the digital programming transmission stream less than or equal to a bandwidth normally allocated for a standard digital programming segment, wherein the standard digital programming segment is a unit of differentiable programming content;

defining a plurality of subsets of the plurality of digital programming components wherein each subset comprises a unique combination of digital programming components from multiple different possible combinations of said digital programming components to comprise a plurality of component programming segments, wherein each subset of digital component programming components segment is also a unit of differentiable programming content;

creating a data table, said data table identifying said plurality of subsets of digital programming components; and

inserting the plurality of component programming segments and said data table into the digital programming transmission stream, wherein the plurality of component

~~programming segments replace the standard digital programming segment in the digital programming transmission stream;~~

~~wherein, without increasing the bandwidth normally allocated for a standard digital programming segment, the quantity of differentiable programming content available in the digital programming transmission stream is increased.~~

2. (Canceled)

3. (Currently Amended) A method of receiving an increased quantity of differentiable programming content in a programming transmission system, the differentiable programming content received by at least one user via a digital programming transmission stream, the method comprising:

receiving a plurality of synchronized digital programming components in the digital programming transmission stream, more than one of the plurality of digital programming components capable of being presented to a user concurrently, the plurality of digital programming components utilizing a bandwidth of the digital programming transmission stream less than or equal to a bandwidth normally allocated for a standard digital programming segment, wherein the standard digital programming segment is a unit of differentiable programming content; and receiving a data table, said data table identifying a plurality of programming content segments, each of said programming content segments comprising a unique combination of digital programming components from multiple different possible combinations of said digital programming components, each of said programming content segments also being a unit of differentiable programming content; and selecting one of said programming content segments as a selected programming content segment for presentation a plurality of subsets of the plurality of digital programming components, wherein each subset comprises at least one component programming segment, and the plurality of subsets of the digital programming

~~components replace the standard digital programming segment in the digital programming transmission stream;~~

~~wherein each component programming segment is also a unit of differentiable programming content; wherein, without increasing the bandwidth normally allocated for a standard digital programming segment, the quantity of differentiable programming content received in the digital programming transmission stream is increased.~~

4. (Cancelled)

5. (Currently Amended) The [[A]] method as described in claim 1, said method further comprising:

~~generating data commands, said data commands identifying targeted audience profiles for each of said plurality of subsets of digital programming components; inserting the data commands plurality of digital programming components into the digital programming transmission stream.~~

6 - 8. (Cancelled)

9. (Currently Amended) The [[A]] method as described in claim 3 [[5]] wherein the method further comprises:

~~receiving data commands, said data commands identifying targeted audience profiles for each of said programming content segments; and~~

~~wherein selecting one of said programming content segments as a selected programming content segment comprises processing said data commands to select one of said programming content segments the plurality of digital programming components is inserted into the digital programming transmission stream in addition to the standard digital programming segment.~~

10. (Currently Amended) The [[A]] method as described in claim 1 wherein the standard digital programming segment is reduced in quality and therefore utilizes less than the bandwidth normally allocated for a standard digital programming segment.

11. (Currently Amended) The [[A]] method as described in claim 9 wherein the standard digital programming segment is reduced in quality and therefore utilizes less than the bandwidth normally allocated for a standard digital programming segment.

12. (Canceled)

13. (Currently Amended) The [[A]] method as described in claim 3 wherein the plurality of digital programming components is received in the digital programming transmission stream in addition to the standard digital programming segment.

14. (Currently Amended) The [[A]] method as described in claim 13 wherein the standard digital programming segment is reduced in quality and therefore utilizes less than the bandwidth normally allocated for a standard digital programming segment.

15. (Currently Amended) The [[A]] method as described in claim 1, ~~claim 2, claim 3, or claim 4~~ wherein the plurality of digital programming components are selected from the group consisting of: video, still-frame video, audio, graphics, text, animation, and media objects.

16. (Currently Amended) The [[A]] method as described in claim 3 [[15]] wherein the plurality of digital programming components are selected from the group consisting of: video, still-frame video, audio, graphics, text, animation, and media objects ~~still-frame video comprises scalable video frames.~~

17. (Currently Amended) The [[A]] method as described in claim 15 wherein the audio comprises less than CD-quality audio.

18. (Currently Amended) The [[A]] method as described in claim 1, ~~claim 2,~~
~~or claim 4~~ further comprising digitally compressing the plurality of digital programming components.

19. (Currently Amended) The [[A]] method as described in claim 3 further comprising digitally decompressing the plurality of digital programming components.

20. (Currently Amended) The [[A]] method as described in claim 1 wherein the digital programming transmission stream is carried over a transmission medium selected from the group consisting of: terrestrial television broadcast, cable, satellite, microwave, radio, telephony, wireless telephony, digital subscriber line, fiber optic, a personal communications network, and a communication network.

21. (Canceled)

22. (Currently Amended) The [[A]] method as described in claim 3 wherein the digital programming transmission stream is received over a transmission medium selected from the group consisting of: terrestrial television broadcast, cable, satellite, microwave, radio, telephony, wireless telephony, digital subscriber line, fiber optic, a personal communications network, and a communication network.

23. (Canceled)

24. (Currently Amended) The [[A]] method as described in claim ~~3~~ ~~4~~, ~~claim 2, claim 3, or claim 4~~ wherein the differentiable programming content comprises advertising programming content.

25. (Canceled)

26. (Currently Amended) The [[A]] method as described in claim 1, said method further comprising:

synchronizing the plurality of digital programming components.

27 – 28. (Canceled)

29. (Currently Amended) The [[A]] method as described in claim 9 [[28]] wherein the processing said data commands to select one of said programming content segments uses at least one component programming segment is targeted toward the at least one of the plurality of users based upon user profile information of the at least one of the plurality of users accessible by the programming transmission system.

30 - 31 (Canceled)

32. (Currently Amended) The [[A]] method as described in claim 3 further comprising outputting the selected at least one component programming content segment to a presentation device for presentation to the at least one user.

33. (Currently Amended) The [[A]] method as described in claim 3 further comprising switching from a first of the at least one component programming content segment to a second of the at least one component programming content segment.

34. (Currently Amended) A method as described in claim 33 further comprising outputting the first and second of the at least one component programming content segment in sequence to a presentation device for presentation to the at least one user, and wherein the step of switching is seamless, whereby the switch is performed without a delay

perceptible by the at least one user between presentation of the first of the at least one component programming segment and presentation of the second of the at least one component programming segment on the presentation device.

35. (Currently Amended) The [[A]] method as described in claim 32 or claim 34 wherein the presentation device comprises a device selected from the group consisting of: television, radio, video tape player, audio tape player, digital video disk player, compact digital disk player, minidisk player, digital file player, video game player, computer, personal digital assistant device, telephone, wireless telephone, and a telephony device for the deaf.

36. (Currently Amended) A system for providing an increased quantity of differentiable programming content in a programming transmission system, the differentiable programming content transmitted via a digital programming transmission stream, to a plurality of users, the system comprising:

an encoder that interleaves a plurality of synchronized digital programming components, more than one of the plurality of digital programming components capable of being presented to a user concurrently, wherein a plurality of subsets of the plurality of digital programming components comprises a plurality of component programming segments, wherein each subset comprises a unique combination of digital programming components from multiple different possible combinations of said digital programming components, wherein the plurality of subsets of the digital programming components replace the standard digital programming segment in the digital programming transmission stream, and each component programming segment is a unit of differentiable programming content; and

a transmitter that transmits the plurality of digital programming components in the digital programming transmission stream to the plurality of users, the plurality of digital programming components utilizing a bandwidth of the digital programming transmission stream less than or equal to a bandwidth normally

allocated for a standard digital programming segment, wherein the standard digital programming segment is also a unit of differentiable programming content; wherein, ~~without increasing the bandwidth normally allocated for a standard digital programming segment,~~ the quantity of differentiable programming content transmitted in the digital programming transmission stream by the transmitter is increased.

37. (Currently Amended) A system for receiving an increased quantity of differentiable programming content in a programming transmission system, the differentiable programming content received by at least one user via a digital programming transmission stream, the system comprising:

a tuner that receives a plurality of synchronized digital programming components in the digital programming transmission stream, more than one of the plurality of digital programming components capable of being presented to a user concurrently, the plurality of digital programming components utilizing a bandwidth of the digital programming transmission stream less than or equal to a bandwidth normally allocated for a standard digital programming segment, wherein the standard digital programming segment is a unit of differentiable programming content;

a decoder that identifies separates and selects a plurality of subsets of the plurality of digital programming components, wherein each subset comprises a unique combination of digital programming components from multiple different possible combinations of said digital programming components, the plurality of subsets each comprise at least one component programming content segment, wherein the plurality of subsets of the digital programming components replace the standard digital programming segment in the digital programming transmission stream and wherein each component programming content segment is also a unit of differentiable programming content;

a program output that outputs the at least one ~~component~~ programming content segment to a presentation device for presentation of the at least one component programming segment to the at least one user; and
a processor that coordinates and directs the functions of the tuner, the decoder, and the program output;

wherein, ~~without increasing the bandwidth normally allocated for a standard digital programming segment,~~ the quantity of differentiable programming content in the digital programming transmission stream received by the receiver is increased.

38. (Currently Amended) A system for providing an increased quantity of differentiable programming content in a programming transmission system, the differentiable programming content transmitted via a digital programming transmission stream, to a plurality of users, the system comprising:

a means for combining a plurality of synchronized digital programming components, more than one of the plurality of digital programming components capable of being presented to a user concurrently, wherein a plurality of subsets of digital programming components replace the standard digital programming segment in the digital programming transmission stream, wherein each subset comprises a unique combination of digital programming components from multiple different possible combinations of said digital programming components, [[and]] wherein each subset of the plurality of digital programming components comprise at least one ~~component~~ programming content segment, and each ~~component~~ programming content segment is a unit of differentiable programming content; and

a means for transmitting the plurality of digital programming components in the digital programming transmission stream to the plurality of users, the plurality of digital programming components utilizing a bandwidth of the digital programming transmission stream less than or equal to a bandwidth normally

allocated for a standard digital programming segment, wherein the standard digital programming segment is also a unit of differentiable programming content; wherein, ~~without increasing the bandwidth normally allocated for a standard digital programming segment, the quantity of differentiable programming content transmitted in the digital programming transmission stream is increased.~~

39. (Currently Amended) A system for receiving an increased quantity of differentiable programming content in a programming transmission system, the differentiable programming content received by at least one user via a digital programming transmission stream, the system comprising:

a means for receiving a plurality of synchronized digital programming components in the digital programming transmission stream, more than one of the plurality of digital programming components capable of being presented to a user concurrently, the plurality of digital programming components utilizing a bandwidth of the digital programming transmission stream less than or equal to a bandwidth normally allocated for a standard digital programming segment, wherein the standard digital programming segment is a unit of differentiable programming content;

a means for selecting at least one subset of the plurality of digital programming components, wherein the at least one subset comprises a unique combination of digital programming components from multiple different possible combinations of said digital programming components, the at least one subset comprising at least one component programming content segment, wherein a plurality of subsets of the digital programming components replace the standard digital programming segment in the digital programming transmission stream and wherein each programming content segment is also a unit of differentiable programming content;

a means for outputting the at least one ~~component~~ programming content segment to a means for presenting the at least one ~~component~~ programming content segment to the at least one user; and

a means for processing that coordinates and directs the functions of the receiving means, the selecting means, and the outputting means;
wherein, ~~without increasing the bandwidth normally allocated for a standard digital programming segment,~~ the quantity of differentiable programming content in the digital programming received by the receiving means is increased.

40 - 41. (Canceled)

42. ((Currently Amended) The [[A]] system as described in claim 36 wherein the transmitter transmits the plurality of digital programming components in the digital programming transmission stream in addition to the standard digital programming segment.

43. (Currently Amended) The [[A]] system as described in claim 38 wherein the transmitting means transmits the plurality of digital programming components in the digital programming transmission stream in addition to the standard digital programming segment.

44 - 45. (Canceled)

46. (Currently Amended) The [[A]] system as described in claim 37 wherein the receiver receives the plurality of digital programming components in the digital programming transmission stream in addition to the standard digital programming segment.

47. (Currently Amended) The [[A]] system as described in claim 39 wherein the receiving means receives the plurality of digital programming components in the digital programming transmission stream in addition to the standard digital programming segment.

48. (Currently Amended) The [[A]] system as described in claim 42, claim 43, claim 46, or claim 47 wherein the standard digital programming segment is reduced in quality and therefore utilizes less than the bandwidth normally allocated for a standard digital programming segment.

49. (Currently Amended) The [[A]] system as described in claim 36, claim 37, claim 38, or claim 39 wherein the plurality of digital programming components are selected from the group consisting of: video, still-frame video, audio, graphics, text, animation, and media objects.

50. (Currently Amended) The [[A]] system as described in claim 49 wherein the still-frame video comprises scalable video frames.

51. (Currently Amended) The [[A]] system as described in claim 49 wherein the audio comprises less than CD-quality audio.

52. (Currently Amended) The [[A]] system as described in claim 36, said system further comprising:

a digital compressor that compresses the plurality of digital programming components before they reach the multiplexer.

53. (Currently Amended) The [[A]] system as described in claim 38, said system further comprising:

a means for digital compressing the plurality of digital programming components before they reach the combining means.

54. (Currently Amended) The [[A]] system as described in claim 37, said system further comprising:

a digital decompressor that decompresses the plurality of digital programming components, and wherein the processor further coordinates and directs the function of the decompressor.

55. (Currently Amended) The [[A]] system as described in claim 39, said system further comprising:

means for digitally decompressing the plurality of digital programming components, and wherein the processing means further coordinates and directs the function of the decompressing means.

56. (Currently Amended) The [[A]] system as described in claim 36, said system further comprising:

a synchronization component, said synchronization component that synchronizes the plurality of digital programming components ~~before they reach the multiplexer~~.

57. (Currently Amended) The [[A]] system as described in claim 38, said system further comprising:

a means for synchronizing the plurality of digital programming components before they reach the combining means.

58. (Currently Amended) The [[A]] system as described in claim 36, said system further comprising:

a modulator that modulates the ~~multiplexed~~ digital programming components before they reach the transmitter.

59. (Currently Amended) The [[A]] system as described in claim 38, said system further comprising:

a means for modulating the ~~combined~~ digital programming components before they reach the transmitting means.

60. (Currently Amended) The [[A]] system as described in claim 36, said system further comprising:

a memory for storing the plurality of digital programming components ~~before they reach the multiplexer.~~

61. (Currently Amended) The [[A]] system as described in claim 38, said system further comprising:

a means for storing the plurality of digital programming components before they reach the combining means.

62. (Currently Amended) The [[A]] system as described in claim 36 further comprising a memory that stores user profile information of the at least one of the plurality of users, wherein the processor further coordinates and directs the function of the memory, and wherein the at least one component programming segment is targeted to [[the]] at least one of the plurality of users based upon [[the]] user profile information of the at least one of the plurality of users, to provide particular differentiable programming content to the at least one of the plurality of users.

63. (Currently Amended) The [[A]] system as described in claim 37 wherein the at least one ~~component~~ programming content segment is targeted toward the at least one user to provide particular differentiable programming content to the at least one user, and wherein the signal selector further selects the at least one ~~component~~ programming content segment based upon information in the at least one subset of the plurality of digital programming components that the at least one component programming segment is targeted to the at least one user.

64. (Currently Amended) The [[A]] system as described in claim 63 further comprising a memory for storing user profile information of the at least one user, wherein the signal selector further selects the at least one component programming content segment that is targeted to the at least one user based upon the user profile information of the at least one user.

65. (Currently Amended) The [[A]] system as described in claim 36 wherein transmitter transmits the digital programming transmission stream over a transmission medium selected from the group consisting of: terrestrial television broadcast, cable, satellite, microwave, radio, telephony, wireless telephony, digital subscriber line, fiber optic, a personal communications network, and a communication network.

66. (Currently Amended) The [[A]] system as described in claim 37 wherein the receiver receives the digital programming transmission stream over a transmission medium selected from the group consisting of: terrestrial television broadcast, cable, satellite, microwave, radio, telephony, wireless telephony, digital subscriber line, fiber optic, a personal communications network, and a communication network.

67 – 68. (Canceled)

69. (Currently Amended) The [[A]] system as described in claim 39 further comprising a means for connecting the receiving means with a communication network, wherein the plurality of digital programming components are received over the communication network.

70. (Currently Amended) The [[A]] system as described in claim 36 or claim 37 wherein the differentiable programming content comprises advertising programming content.

71. (Canceled)

72. (Currently Amended) The [[A]] system as described in claim 37 further comprising a signal switcher that switches from a first of the at least one ~~component~~ programming content segment to a second of the at least one ~~component~~ programming content segment, and wherein the processor further coordinates and directs the function of the signal switcher.

73. (Currently Amended) The [[A]] system as described in claim 72 wherein the switch by the signal switcher is seamless, whereby the switch is performed without a delay perceptible by the at least one user between presentation of the first of the at least one ~~component~~ programming content segment and presentation of the second of the at least one ~~component~~ programming content segment on the presentation device.

74. (Currently Amended) The [[A]] system as described in claim 37 wherein the presentation device comprises a device selected from the group consisting of: television, radio, video tape player, audio tape player, digital video disk player, compact digital disk player, minidisk player, digital file player, video game player, computer, personal digital assistant device, telephone, wireless telephone, and a telephony device for the deaf

75 - 76. (Canceled)

77. (Currently Amended) A method of receiving an increased quantity of differentiable advertising segments in a programming transmission system, the differentiable advertising segments received by at least one user via a digital programming transmission stream, the method comprising:

receiving a plurality of synchronized digital programming components in the digital programming transmission stream, more than one of the plurality of digital programming components capable of being presented to a user concurrently, the plurality of digital programming components utilizing a bandwidth of the digital programming transmission stream less than or equal to a bandwidth normally

allocated for a full-motion audio-video segment, wherein the full motion audio-video segment is a unit of differentiable programming content, wherein a plurality of subsets of the digital programming components replace the standard digital programming segment in the digital programming transmission stream; and selecting for presentation at least one subset of the plurality of digital programming components, wherein the at least one subset comprises a unique combination of digital programming components from multiple different possible combinations of said digital programming components, the selection performed by a processor implementing at least one command code, the selection based upon packet identification numbers of a plurality of packets comprising the at least one subset, the at least one subset comprising at least one advertising segment, wherein the at least one advertising segment is also a unit of differentiable programming content; wherein, without increasing the bandwidth normally allocated for a full motion audio-video segment, the quantity of differentiable advertising segments received in the digital programming transmission stream is increased.

78. (Currently Amended) The [[A]] method as described in claim 77 wherein the plurality of digital programming components are selected from the group consisting of: video, still-frame video, audio, graphics, text, animation, and media objects.

79. (Currently Amended) The [[A]] method as described in claim 77 wherein the step of receiving further comprises receiving the at least one command code in the digital programming transmission stream.

80. ((Currently Amended) The [[A]] method as described in claim 77 further comprising receiving the at least one command code from a user via a user interface.